http://ueg.sagepub.com

October 2017 : Volume 5 : Supplement 1
ISSN 2050-6406 (Print) : ISSN 2050-6414 (Online)

UNITED EUROPEAN GASTROENTEROLOGY

ueg journal

An international forum for clinical practice and research in gastroenterology

25th United European Gastroenterology Week Barcelona 2017

Abstract Issue

mononuclear layer containing stem cells is a novel approach for regeneration of liver cell which can be a therapeutic option for those patients.
Aims & Methods: To determine the outcome after intrasplenic or intrahepatic injection of autologous bone marrow stem cells (ABMSC) transplantation in patients with liver cell failure secondary to chronic hepatitis C infection. Sixty chronic hepatitis C patients with liver cell failure were prospectively enrolled. They were classified into 3 groups; group I: 20 patients underwent (ABMSC) injected intrasplenic. Group Ia: 10 patients underwent (ABMSC) injected intrasplenic after trans differentiation into hepatocytes with regular amount of growth factor. Group Ib: 10 patients underwent (ABMSC) injected intrasplenic after trans differentiation into hepatocytes with the double amount of growth factor. Group II: consisted of 20 patients underwent (ABMSC) injected intra hepatic (right portal branch). Group IIa: 10 patients underwent (ABMSC) injected intrahepatic after trans differentiation into hepatocytes using regular amount of growth factor. Group IIb: 10 patients underwent (ABMSC) injected intrahepatic; after trans differentiation into hepatocytes with the double amount of growth factor. Group III: (Control Group): consisted of 20 patients received traditional supportive treatment for chronic liver cell failure and symptomatic treatment of ascites and bleeding abnormalities. All groups of patients were followed regularly for nine months clinically, biochemically and ultrasonographically. Fatigue was assessed by the modified fatigue impact scale questionnaire before, during and at end of the study.
Results: Our study included 60 patients (78.33% males) with mean age $\pm$ SD (49.9 ± 6 years). Patients who had ABMSC injection showed improvement in clinical parameters as bleeding tendency, ascites, lower limb edema and hepatic encephalopathy. There was statistically significant improvement in serum albumin level and prothrombin time in group I and group II in comparison group III. There was also statistically significant improvement in Child-Turcotte-Pugh in group I and group II in comparison group III at the third month and this was maintained till the end of the study. Fatigue improved in all patients who had ABMSC. There was improvement in serum albumin, ascites, lower limb edema, bleeding tendency and physical activity. Also there was improvement in MELD score and performance status.
Conclusion: Stem cell transplantation has a beneficial effect on synthetic functions of the liver and possibly improves survival and quality of life of patients with end stage liver disease. Autologous bone marrow transplantation is safe and beneficial technique in treatment of in patients with liver cell failure secondary to chronic hepatitis C infection.
Disclosure of Interest: All authors have declared no conflicts of interest.

P0665 PERIPHERAL BLOOD MONONUCLEAR CELL TRANSPLANTATION STIMULATES HEPATOCYTES PROLIFERATION IN PATIENTS WITH ALCOHOLIC LIVER CIRRHOSIS

G.R. Burganova[1], S.R. Abdulkhakov[1], I. M. Gazizov[2], A. A. Gumerova[1], M. A. Titova[1], R. Deev[3], A. P. Kiyasov[1]
[1]*Department Of Morphology And General Pathology, Kazan Federal University, Kazan/Russian Federation*
[2]*Department Of Normal Human Anatomy, Kazan State Medical University, Kazan/Russian Federation*
[3]*Department Of Patological Anatomy With Course Of Forensic Medicine, Ryazan State Medical University, Ryazan/Russian Federation*

Contact E-mail Address: guzel.burganova@gmail.com
Introduction: It is well known that severe liver disease requires a liver transplantation to be treated. But liver transplantation is not available in many countries. An alternative treatment can be a transplantation of autologous bone marrow derived cells which can stimulate liver regeneration. Proliferating cell nuclear antigen (PCNA) shows nuclei of dividing cells and may be useful for calculating proliferation index.
Aims & Methods: The aim of this study was to evaluate changes of proliferation intensity of liver cells in patients with alcoholic liver cirrhosis after autologous peripheral blood mononuclear cell (PBMC) transplantation. This uncontrolled open-labeled clinical trial was approved by Ethical committee of Ministry of Health of the Republic of Tatarstan, Russia. Eleven patients took part in the study, they received granulocyte colony-stimulating factor injections for 5 days for PBMC mobilization. On the 6th day PBMCs were collected and injected into the celiac trunk. Liver biopsies were obtained three times from each person on next time-points: before transplantation of PBMCs into the celiac trunk (initial), three and twelve months after the procedure. Liver biopsy specimens were embedded in paraffin and stained immunohistochemically with antibodies against PCNA. The PCNA labeling index was calculated as the number of PCNA-labeled nuclei for 1000 hepatocyte nuclei in each specimen and the results were expressed as percentage ratios. Statistical analysis was done by Wilcoxon signed-rank test using Statistica v.12 software. p value <0.05 was considered significant.
Results:. Before the transplantation of PBMCs $28.3 \pm 18.3\%$ of all the hepatocytes expressed PCNA without any topographic prevalence. Three months after the transplantation the proportion of proliferating hepatocytes increased up to $36.7 \pm 24.8\%$. Twelve months after transplantation of PBMCs we found hepatocytes proliferation to be 2 times higher than before the procedure. Proportion of proliferating hepatocytes reached $50.2 \pm 17.0\%$ ($p = 0.04$). Great increase in hepatocytes proliferation intensity coincided with biochemical improvements of serum bilirubin, ALT and alkaline phosphatase.
Conclusion: Our study showed that proposed treatment was safe and effective. We can conclude that after transplantation of autologous PBMC s proliferation of hepatocytes greatly contributes to the liver regeneration and improvement of blood biochemical data in patients with alcoholic liver cirrhosis. However, effect of our treatment is not constant and requires repeated PBMC transplantation.
Disclosure of Interest: All authors have declared no conflicts of interest.

P0666 ASSOCIATION BETWEEN NONALCOHOLIC FATTY LIVER DISEASE AND METABOLIC SYNDROME IN APPARENTLY HEALTHY KOREAN ADULTS

K.M. Sohn[1], Y.J. Jeon[2]
[1]*Gastroenterology, Hansol Hospital, Seoul/Korea, Republic of*
[2]*MedGene Lab, Seoul/Korea, Republic of*

Contact E-mail Address: dr.sohnkm@gmail.com
Introduction: The prevalence of non-alcoholic fatty liver disease (NAFLD) has increased and several studies have shown that there is an association between NAFLD and metabolic syndrome (MetS). The aim of this study was to determine how much impact the risk factors of metabolic syndrome has on ultrasonographic fatty liver, especially NAFLD.
Aims & Methods: A total of 41,258 adults who underwent routine comprehensive health evaluations, including abdominal ultrasonography, were selected. We calculated the adjusted prevalence ratios (PRs) for components of MetS (high blood pressure (BP), impaired fasting glucose, low high-density lipoprotein cholesterol (HDL-C), and high triglycerides (TG) according to NAFLD.
Results: NAFLD was found in 13.8% of non-obese subjects and 52.3% of obese subjects. NAFLD was associated with most components of MetS in both obese and non-obese subjects. However, non-obese NAFLD patients had significantly higher PRs for certain components of MetS than did obese patients, especially among women. Body mass index, waist circumference, fasting blood glucose, triglyceride, HDL-C and aspartate aminotransferase, alanine aminotransferase, γ-glutamyl transpeptidase levels all affected NAFLD independently. The prevalence of metabolic syndrome was increased in mild (40.8%) and moderate (57.8%) NAFLD groups. When odd ratio (95% CI) for NAFLD group was compared to the contrast group, there was an increased risk of metabolic syndrome with odd ratio of 12.8 (95% CI, $9.1 \sim 17.0$).
Conclusion: NAFLD and its severity has a close connection with MetS and also with each risk factors of MetS. Therefore, assessment for concurrent MetS among NAFLD patients is considered to be necessary.
Disclosure of Interest: All authors have declared no conflicts of interest.

Reference

1. Kwon YM, Oh SW, Hwang SS, et al. Association of nonalcoholic fatty liver disease with components of metabolic syndrome according to body mass index in Korean adults. *Am J Gastroenterol*. 2012 Dec;107(12):1852–8.

P0667 LEAN-NAFLD IS THE STRONGEST PREDICTOR OF FUTURE OBESITY AMONG URBAN ADULT SRI LANKANS: RESULTS FROM A PROSPECTIVE, COMMUNITY COHORT FOLLOW-UP STUDY

M. A. Niriella[1], S. T. De Silva[1], A. Kasthuriratna[1], A. G. Ranasinghe[1], A. S. Dassanayake[1], A. P. De Silva[1], A. Pathmeswaran[1], A. R. Wickramasinghe[1], N. Kato[2], H. J. De Silva[1]
[1]*Faculty of Medicine, University of Kelaniya, Ragama/Sri Lanka*
[2]*National Center for Global Health and Medicine, Tokyo/Japan*

Contact E-mail Address: maduniln@yahoo.co.uk
Introduction: Obesity is a global problem. Data from the South Asian region is limited.
Aims & Methods: In a cohort follow-up study we investigated obesity among urban, adult, Sri Lankans [selected by age-stratified random sampling from Ragama-MOH area, Gampaha District; initial screening 2007 (aged 35–64 years); re-evaluation 2014 (aged 42–71 years)]. On both occasions structured interview, anthropometry, liver ultrasound, biochemical and serological tests were performed. Total body fat (TBF) and visceral fat percentage (VFP) were assessed by impedance in 2014. General-obesity (GO) was BMI $> 25\,kg/m^2$. Central-obesity (CO) was waist circumference (WC) $> 90\,cm$ males and WC $> 80\,cm$ females. Non-alcoholic fatty liver disease (NAFLD) was diagnosed on ultrasound criteria, safe alcohol consumption and absence of hepatitis B/C markers. Multinomial logistic regression was fitted to assess associations.
Results: In 2007 ($n = 2967$), 614(20.7%) were overweight [51.9%-women], 1161(39.1%) had GO [65.9%-women] and 1584(53.4%) had CO [71%-women]. Females ($p < 0.001$), raised-TG ($p < 0.001$), low-HDL ($p < 0.001$), diabetes ($p < 0.001$), hypertension ($p < 0.001$), NAFLD ($p < 0.001$), and low household income ($p < 0.001$) were significantly associated with prevalent GO and CO respectively. Additionally, increased-age ($p = 0.05$), low-educational level ($p < 0.001$) and unhealthy eating ($p < 0.001$) were associated with prevalent CO. Inadequate physical activity was not associated with either. 2137(72%) attended follow-up in 2014. Of those who were initially non-obese who attended follow-up, 189/1270(14.9%) [64% women] had developed GO (annual-incidence 2.13%) and 206/947(21.9%) [56.3% women] had developed CO (annual incidence 3.12%) after 7 years. TBF and VFP significantly correlated with incident GO and CO ($p < 0.001$). Females gender (OR-1.78, $p < 0.001$; 2.81, $p < 0.001$) and NAFLD (OR-2.93, $p < 0.001$; OR-2.27, $p < 0.001$) independently predicted incident GO and CO respectively.
Conclusion: The prevalence and incidence of GO and CO were high in this cohort. Both incident GO and CO were associated with female gender and